ZELION® HL
LED Horticulture Fixtures

Models: 3x2, 2x2, 2x1, 1x1

ZELION® HL 3x2

ZELION® HL 2x2

ZELION® HL 2x1

ZELION® HL 1x1

User Manual

Installation and Safety Instructions

OSRAM

Product Specifications

ZELION® HL products are designed to enhance growth of various plants by utilizing specific light at specific wavelengths generated using LEDs.

ZELION® HL fixtures are designed to be operated in ambient temperatures up to 40°C and are suitable for use in wet locations.

ZELION® HL fixtures are passive cooled (natural convection) and require no additional cooling when operated under its ambient rated temperature.

ZELION® HL family offers various models with varying size and performance which can be selected to meet specific plant growing areas. Please check which model you own from the product label for performance characteristics. Refer to the sections in this instruction manual for directions on proper installation and operation.

Table 1 ZELION HL Product Specifications

							Overall			
Item Number	Ordering Abbreviation	Watts (W)	Volts (V)	Current (Amps)	Wavelength at Peak Emission (nm)	Working Area (in)	Length (in)	Width (in)	Height (in)	Weight (lb)
61084	ZELION HL 1x1	25	120	0.25	451/660	12 x 12	12.5	6.5	5.2	5
61085	ZELION HL 2x1	50	120	0.5	451/660	24 x 12	18.8	6.5	5.2	8
61086	ZELION HL 2x2	100	120	1.0	451/660	24 x 24	18.8	12.8	5.2	16
61087	ZELION HL 3x2	150	120	1.5	451/660	36 x 24	18.8	19.1	5.2	21

Product Applications

The ZELION HL family of fixtures uses state-of-the-art OSRAM OSLON® LEDs and optics. Whether you are a commercial grower or a do-it-yourself horticulturalist, the modularized ZELION HL family is suitable for your horticulture application. The unique spectral content, which targets the essential absorption peaks of chlorophyll-alpha and chlorophyll-beta, is sure to help you maximize your yields and cut operating expenses with optimum micromoles per energy unit.

Typical applications include:

- Commercial agriculture
- Commercial greenhouses
- Floriculture
- Hydroculture
- Urban farming
- Indoor gardening
- Turf and landscape maintenance
- Home gardening

Key Features & Benefits

- OSLON LEDs were selected to match the absorption spectra of chlorophyll-alpha and beta for enhanced plant propagation
- State-of-the-art optical design and materials for optimum PAR (Photosynthetically Active Radiation)
- Uniform PAR distribution
- 12” x 12” to 36” x 24” working areas
- Passive cooling, completely silent and reliable
- IP65 rated for safe operations in wet and outdoor environments
- Energy saving LEDs compared to traditional light sources
- Each fixture has 4 holes on top-end plate for suitable hanging of wires or chains to accommodate suspension above growing plants
- 6ft cord with 3-prong Edison plug is included
- Water resistant independent red and blue On/Off switches
- 3 year limited warranty

Unpacking and Installation

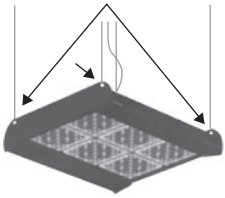
Box Contents

- ZELION® HL Fixture with attached main power cable (approx 6 ft length) with a 3-prong Edison plug
- User Manual
- NOTE: No suspension mounting or installation materials are included. The user should provide suitable materials
- NOTE: Retain original packing materials in case there is a need to return the product to the manufacturer

When unpacking the ZELION HL fixture from the carton, remove all packaging materials from the fixture. Do not remove the ZELION HL fixture from the box by the main power cable. Exercise care when handling to avoid sharp edges. The fixture should be installed by qualified personnel and for safety it may require handling by more than one person.

Suspension and Installation

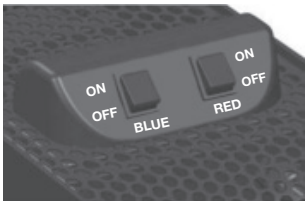
Mounting holes (3 of the 4 shown in this view)



- All electrical connections and wiring should be performed by a qualified electrician.
- Make sure that the main power cable is unplugged from the electrical outlet prior to installation.
- The main power cable of the ZELION HL fixture should never be used to lift or suspend the fixture.
- The ZELION HL fixture has four mounting holes on the top of the side plates to be used with user supplied suspension materials.
- Due to the variations in user applications, the suspension materials are NOT included with the fixture.
- Suspension mounting materials should be non-combustible such as metal shackles, jack chain, looped wire rope, clevis on wire rope or metal rope.
- The suspension materials should be capable of supporting at least 2 times the weight of the total fixture weight (refer to Table 1). The suspension materials should be attached at each of the four fixture mounting holes according to normal and safe practices.
- Suspending / mounting the fixture at the appropriate height above the plant growing area may require more than one person or one person with a platform suitable for holding the fixture while the suspension attachments are completed. Optical lenses should face down onto plant growing area.
- Only after all four suspension mounts are complete, the main power cable should be plugged into a suitable grounded oulet delivering 120V and the rated current (see Table 1).

NOTE: If more than one fixture is to be installed, check with an electrician to ensure that the power supply is adequately fused and grounded.

Fixture Operation



The ZELION HL fixture is equipped with two water resistant switches to independently operate the Red and Blue LED outputs.

The Red and Blue LEDs may be operated independently or at the same time depending on the requirements of the plant growing cycle.

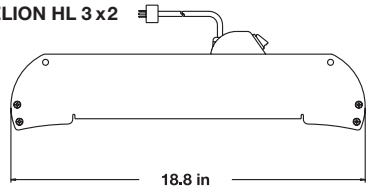
Fixture Cleaning

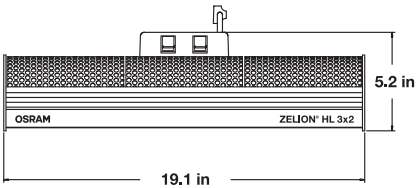
To clean, wipe fixture with a soft cloth. Clean lenses with a mild cleaning solution. DO NOT use abrasive materials, solvents, scouring pads, or abrasive cleaning powders as doing so may scratch the fixture finish.

Fixture Dimensions

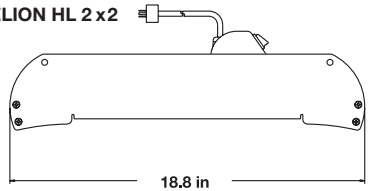
Dimensions of the various models of fixtures are shown below. The weights are shown in Table 1.

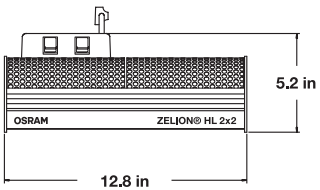
ZELION HL 3 x 2



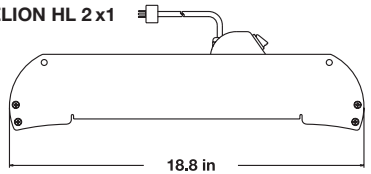


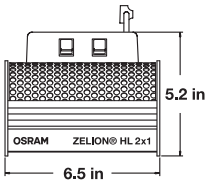
ZELION HL 2 x 2



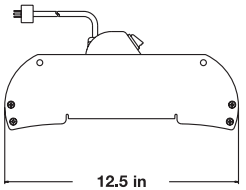


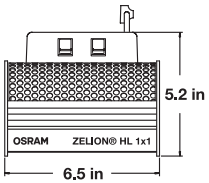
ZELION HL 2 x 1





ZELION HL 1 x 1





⚠ WARNING

TO AVOID PERSONAL INJURY AND/OR POSSIBLE PRODUCT DAMAGE, THE FOLLOWING CAUTIONS MUST BE FOLLOWED:

- Consult a qualified electrician to ensure correct branch circuit conductor.
- All electrical connections and wiring should be performed by a qualified electrician.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.
- To prevent electric shock, match wide blade of plug to wide slot.
- Caution – Risk of fire. (i.e. dry leaves and other combustible debris)
- For chain or hook suspension only.
- Suitable for wet locations. Fixtures are designed to withstand water ingress according to IP 65 standards.
- Suitable for operation in ambient temperature not to exceed 40°C.
- Storage temperature of fixture is -20°C to +80°C.
- To prevent electrical shock, turn off power before inspection, installation, or removal!
- This fixture should not be installed in an enclosure or areas with limited ventilation or high ambient temperatures.
- Do not drape, wrap, hang, or place anything on the ZELION HL fixture.
- This fixture should not be operated in any other orientation than that described in the installation portion of this manual.
- This fixture is not intended for use in emergency exit signs or lighting.
- Risk of electrical shock: Do not disassemble product. No user serviceable parts inside.
- Do not stare directly at the LED lights in fixtures when turned on. Possible hazardous optical radiation emitted from this product. May be harmful to eyes. ANSI RG-2 (Moderate Risk)
- Note: This product is not designed to be used with dimmers.
- If the power cable of fixture is damaged, please call Customer Service at 888-677-2627 or e-mail: docustsrv@sylvania.com

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ZELION® HL LED HORTICULTURE FIXTURES LIMITED WARRANTY

OSRAM SYLVANIA Inc. ("OSI") provides a limited warranty for ZELION® HL LED Horticulture Fixtures listed below. For sale and use in the United States only. Subject to change without notice

This warranty is effective for Product sold as of November 1st, 2014 and installed in the United States. OSI warrants to their authorized distributors and subsequent purchasers the ZELION HL LED Horticulture Fixtures (the "Product") listed below, when delivered in new condition and in its original packaging, to be free from defects in materials and workmanship for a period of three (3) years from the date of purchase (or Product's manufacturing date, if purchase date is not known or verifiable), subject to the Terms and Conditions set forth herein.

If the Product fails to operate for the warranty period, OSI will, at its option, repair or replace the Product or, if need be, the Product component with the same or similar Product or Product component, at no charge, in accordance with the Terms and Conditions below. OSI reserves the right to use products or component parts in the warranty repair or replacement process that will be comparable in function and performance to an original product or part, as determined by OSI in its sole discretion, and warranted for the remainder of the original warranty period. LABOR IS NOT INCLUDED.

ZELION HL LED Horticulture Fixture Description	OSRAM Product Number
ZELION HL 1x1 LED	61084
ZELION HL 2x1 LED	61085
ZELION HL 2x2 LED	61086
ZELION HL 3x2 LED	61087

TERMS AND CONDITIONS

This warranty only applies when the Product is: Properly wired and installed, and operated and maintained in conditions, including environmental conditions (temperature, humidity) in accordance with the instructions contained in the User Manual. [This warranty excludes defects or damage caused by any primary side (line voltage) power source problems including, but not limited to, unregulated power, short circuits or lightning induced power surges, under/over voltage/current conditions, operating outside specified temperature range, or storing the Product outside the specified temperature range.] The warranty excludes defects resulting from acts of God, fire, vandalism, or civil disturbance. This warranty does not apply to any abnormal use or use in violation of any applicable standard, code or instructions for use in installations including those contained in the latest National Electrical Code (NEC), the Standards for Safety of Underwriters Laboratory, Inc. (UL), Standards for the American National Standards Institute (ANSI) or, in Canada, the Canadian Standards Association (CSA). This warranty will not apply in the event of conditions demonstrating abnormal use or stress, including but not limited to:

- Operating temperature outside the specified temperature range in the User Manual
- Storing the product outside the specified temperature range in the User manual

This warranty does not cover equipment, systems or components from other manufacturers that the Purchaser uses in conjunction with the Product. Any repair, alteration or modification of the Product, including replacement of Product components with components of other manufacturers will void the warranty in its entirety.

WARRANTY ACTIVATION / PROCESS

To obtain coverage under this warranty, purchaser must complete and deliver to OSI a warranty registration form to the address noted in the form within 30 days of purchase.
In the event of an allegedly defective Product, Purchaser shall contact Display/Optic Specialty Lighting customer service at:

- Phone: 888-677-2627
- Fax: 855-543-1043
- Email: docustsrv@sylvania.com

If deemed necessary by OSI under the terms of this warranty, Purchaser will receive a Return Material Authorization ("RMA") number, and shall promptly return the Product or Product component at the Purchaser's expense, to the address provided on the RMA. The RMA must be included on both the packing slip of the Product or Product component being returned and on the outside of the box. FAILURE TO FOLLOW THIS PROCEDURE SHALL VOID THE WARRANTY. If upon examination of the Product, OSI determines the root cause of failure to be due to a defect in materials or workmanship, OSI will provide the appropriate remedy as set forth above. OSI RESERVES THE RIGHT TO EXAMINE ALL ALLEGEDLY FAILED PRODUCTS OR PRODUCT COMPONENTS TO VERIFY THE CAUSE OF FAILURE AND PATTERNS OF USAGE AND SHALL BE THE SOLE JUDGE AS TO WHETHER A PRODUCT OR PRODUCT COMPONENT IS DEFECTIVE AND COVERED UNDER THIS WARRANTY.

LIMITATION OF LIABILITY

THE FOREGOING SHALL CONSTITUTE THE EXCLUSIVE REMEDY OF PURCHASER AND THE SOLE LIABILITY OF OSI FOR THE PRODUCT. OSI DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILTIY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL OSI BE LIABLE FOR ANY OTHER COSTS OR DAMAGES, INCLUDING LOST PROFITS OR REVENUES, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY. IN NO EVENT SHALL OSI'S TOTAL LIABILITY FOR ANY REASON HEREUNDER EXCEED THE PRICE PAID BY PURCHASER FOR THE PRODUCT PURCHASED HEREUNDER.

QUESTIONS?

Please call customer service at 888-677-2627, e-mail docustsrv@sylvania.com or contact your local OSRAM SYLVANIA representative.

Intertek
4010603

ZELION HL Products have been tested to the following standards:
Maximum ambient temperature: 40°C
Suitable for use in wet locations
Conforms to ANSI/UL Std. 1598
IP65
Meets FCC Part 15b

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Imported by:
OSRAM SYLVANIA Inc.
275 West Main Street
Hillsboro, NH 03244
Made in China

INST1232
X26872

ZELION® HL LED HORTICULTURE FIXTURES LIMITED WARRANTY

Photocopy this form and use it to register the OSRAM ZELION HL Horticulture Fixture. The warranty coverage begins upon receipt of a completed registration form, but you must register the product in order to receive warranty service.

User Information

Owner/Purchaser's Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Contact Name: _____

Phone: _____ Email: _____

Operating Hours: _____ Hours/Day _____ Days/Year

Type & Quantities (Description and NAED Item # as shown on product packaging)

Fixture Description	Item#	Quantity	Comments

Please Complete and Return to:
OSRAM SYLVANIA Inc.
Attn: Warranty Dept.
275 West Main Street
Hillsboro, NH 03244
Tel #: 888-677-2627
Email: docustsrv@sylvania.com

Or Complete and Fax to:
OSRAM SYLVANIA
Fax #: 855-543-1043

OSRAM